

عنوان مقاله:

Design of a Digital Sigma Delta Modulator with Separate Pipeline Lines for Fractional Frequency Synthesizers

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خلاصه مقاله:

Digital Sigma Delta Modulator architecture is widely used in fractional frequency synthesizers. A frequency synthesizer is a major component of wireless communication systems. The output of the frequency synthesizer system is locked based on the phase lock loop at a specific reference frequency. In this case, the output frequency is the same as the oscillator frequency of the VCO. The main advantage of digital sigma delta modulator with multi-layer structure is its ability to be implemented as a pipeline. This method will reduce the delay and increase the sampling frequency. In this paper, a digital sigma delta modulator of separate lines is designed by pipeline method and its power spectral density is plotted. This method increases the speed of the modulator and reduces the hardware consumption.

کلمات کلیدی:

Digital Sigma Delta Modulator, Pipeline Method, Hardware Consumption, Speed

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